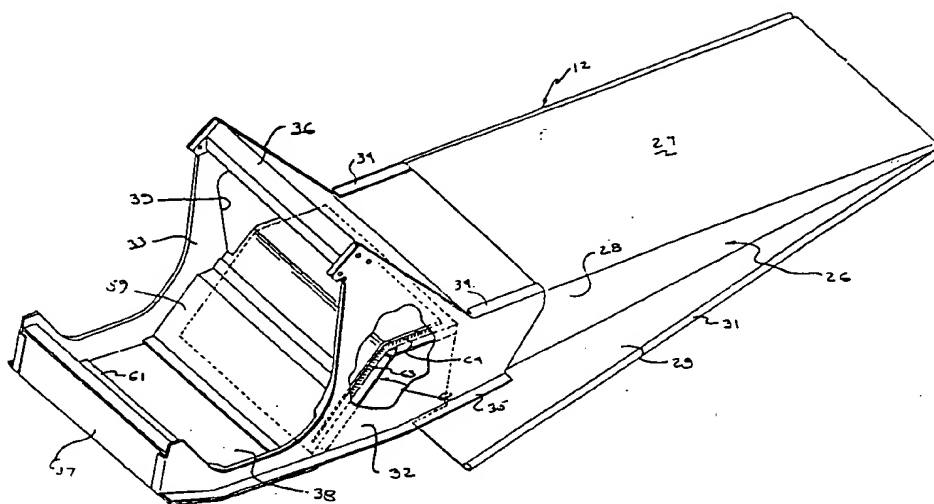


(21) (A1) **2,251,769**  
(22) 1994/06/08  
(43) 1995/08/19  
(62) 2,125,417  
(22) 1994/06/08

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(51) Int. Cl. <sup>6</sup> B62D 21/18, B62D 55/07  
(30) 1994/02/18 (198,762) US  
(54) **ASSEMBLAGE DE CHASSIS POUR MOTONEIGE**  
(54) **SNOWMOBILE FRAME ASSEMBLY**



(57) Cette invention concerne une motoneige dont les éléments sont agencés pour optimiser l'emplacement de son centre de gravité, les principaux éléments étant positionnés de manière que la majeure partie de leur poids porte sur la courroie d'entraînement. La motoneige a un châssis constitué d'éléments assemblés et définissant un berceau destiné à recevoir le moteur qui assure l'entraînement de la courroie par l'intermédiaire de deux transmissions. Une de ces transmissions est disposée à l'intérieur du châssis et dans un carter fixé dans une ouverture latérale de celui-ci. La direction de la motoneige est assurée au moyen d'un arbre de direction qui passe au-dessus du moteur dans un espace libre entre le collecteur d'échappement et le moteur lui-même. Cette agencement favorise un encombrement réduit. Le fait de placer la transmission à l'intérieur du châssis permet d'aménager un siège avant associé à des appuie-pieds placés à l'extérieur de la transmission mais à proximité immédiate des flancs du châssis.

(57) A snowmobile construction wherein the components are laid out so as to improve the center of gravity of the snowmobile and position the major components so that they will exert a large portion of their weight on the drive belt. The snowmobile includes a built-up frame assembly that defines a cradle in which the engine is positioned and which drives the drive belt through a pair of transmissions. One of these transmissions is disposed within the frame assembly and in a casing carried by an opening in one side of the frame assembly. The snowmobile is steered by a steering shaft that extends across the top of the engine and through a space between the exhaust manifold of the engine and the engine so as to provide a compact assembly. The positioning of the transmission inboard of the frame permits the use of a forwardly positioned seat with foot rests disposed outwardly of the transmission but closely adjacent the sides of the frame.



## SNOWMOBILE FRAME ASSEMBLY

ABSTRACT

5 A snowmobile construction wherein the components are  
laid out so as to improve the center of gravity of the  
snowmobile and position the major components so that they  
will exert a large portion of their weight on the drive belt.  
The snowmobile includes a built-up frame assembly that  
defines a cradle in which the engine is positioned and which  
10 drives the drive belt through a pair of transmissions. One  
of these transmissions is disposed within the frame assembly  
and in a casing carried by an opening in one side of the  
frame assembly. The snowmobile is steered by a steering  
shaft that extends across the top of the engine and through  
15 a space between the exhaust manifold of the engine and the  
engine so as to provide a compact assembly. The positioning  
of the transmission inboard of the frame permits the use of  
a forwardly positioned seat with foot rests disposed  
outwardly of the transmission but closely adjacent the sides  
20 of the frame.

## CLAIMS:

1. A frame assembly for a snowmobile comprised of a first member comprised of a pair of side portions and a top portion having a generally inverted U-shaped cross section adapted to overlie a drive belt, a pair of front side plates affixed to the forward ends of said side portions and extending forwardly therefrom for defining a cradle adapted to receive an internal combustion engine for powering the snowmobile and at least one cross member affixed to and spanning said front side plates.

2. A frame assembly for a snowmobile as in Claim 1, wherein the side plates have a generally C-shaped configuration in side elevation and wherein the cross-member extends across at least one leg of one of the C-shaped portions.

3. A frame assembly for a snowmobile as in Claim 2, further including a second cross-member extending transversely across the other legs of the side plates.

4. A frame assembly for a snowmobile as in Claim 3, further including a sheet metal member affixed to the cross-members and extending between the side plates to form a lower surface of the cradle.

5. A frame assembly for a snowmobile as in Claim 4, wherein the engine is supported on a pair of sub-frames affixed to the side plates adjacent the cross-members.

6. A frame assembly for a snowmobile as in Claim 1, further including transmission means for driving the drive belt from the engine mounted in the frame assembly.

7. A frame assembly for a snowmobile as in Claim 6, wherein the transmission is contained within a transmission case affixed to the frame assembly.

8. A frame assembly for a snowmobile as in Claim 7, wherein the one front frame side plates has an opening receiving the transmission case.

9. A frame assembly for a snowmobile as in Claim 8, wherein the opening receives a first transmission case member containing the transmission means and extending inwardly from the one frame member and a cover affixed to said transmission case member.

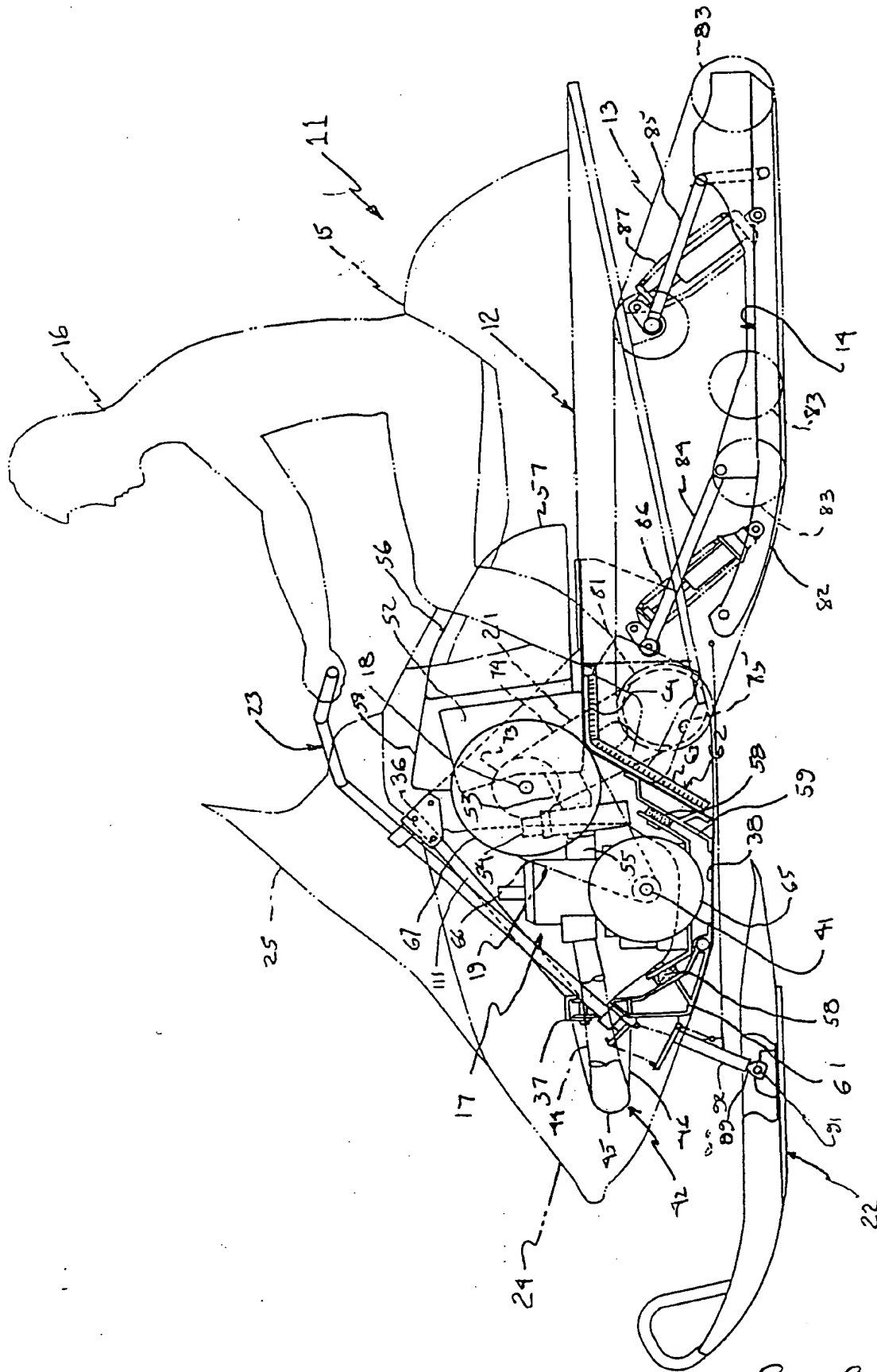
10. A frame assembly for a snowmobile as in Claim 1, further including suspension means for suspending a pair of dirigible front skis from the side plates and means for steering said front skis including a steering shaft journaled by the cross-member.

11. A frame assembly for a snowmobile as in Claim 10, including a pair of cross-braces extending between the upper and lower ends of each of the side plates for providing structural reinforcing therefor.

12. A frame assembly for a snowmobile as in Claim 10, wherein the side plates have a generally C-shaped configuration in side elevation and wherein the cross-member extends across at least one leg of one of the C-shaped portions.

13. A frame assembly for a snowmobile as in Claim 12, further including a second cross-member extending transversely across the other legs of the side plates.

14. A frame assembly for a snowmobile as in Claim 13, further including a pair of cross-braces extending between the legs of the respective side plates for offering further structural reinforcing.



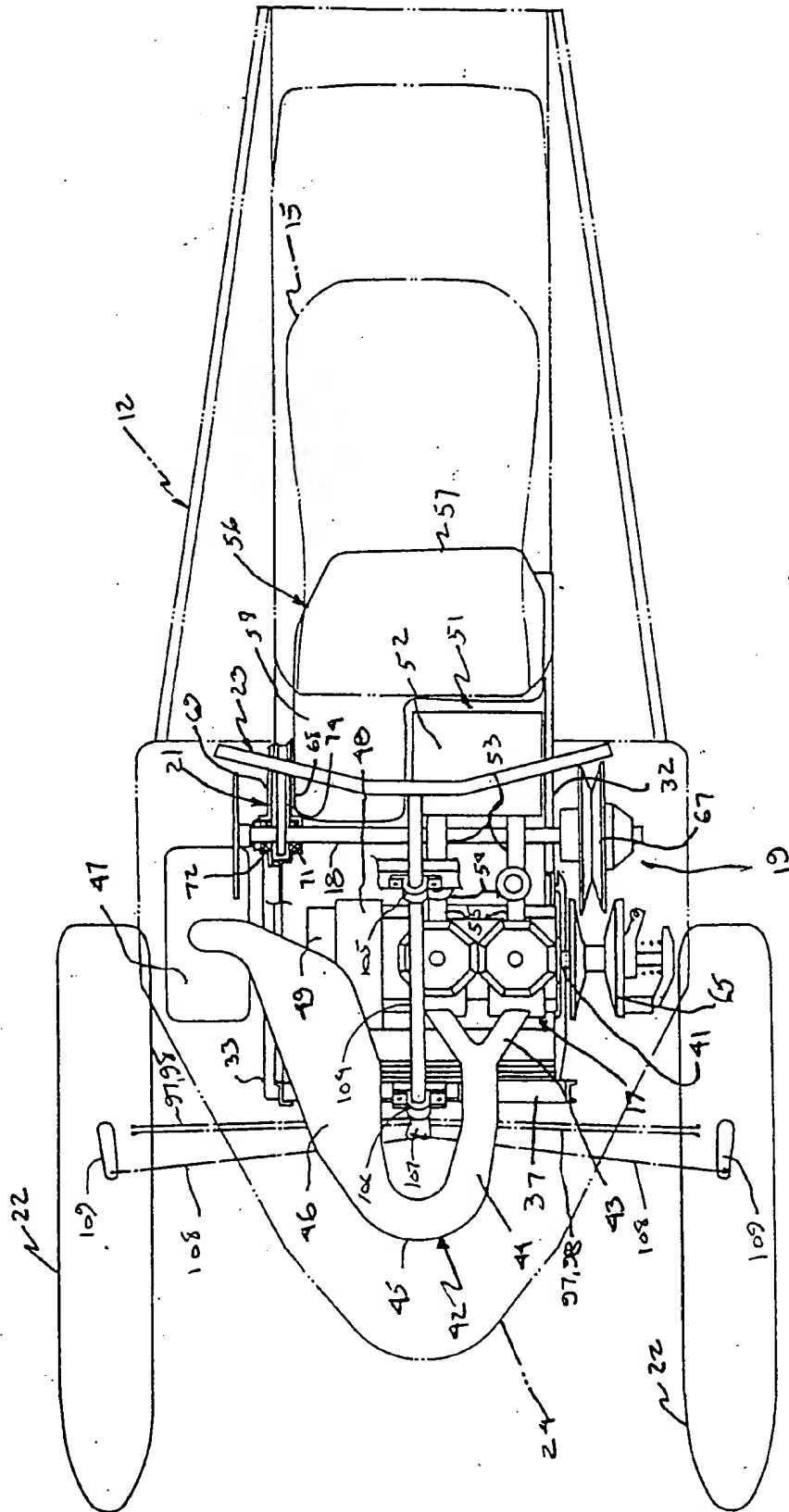


Figure 2

Scott & Aylen

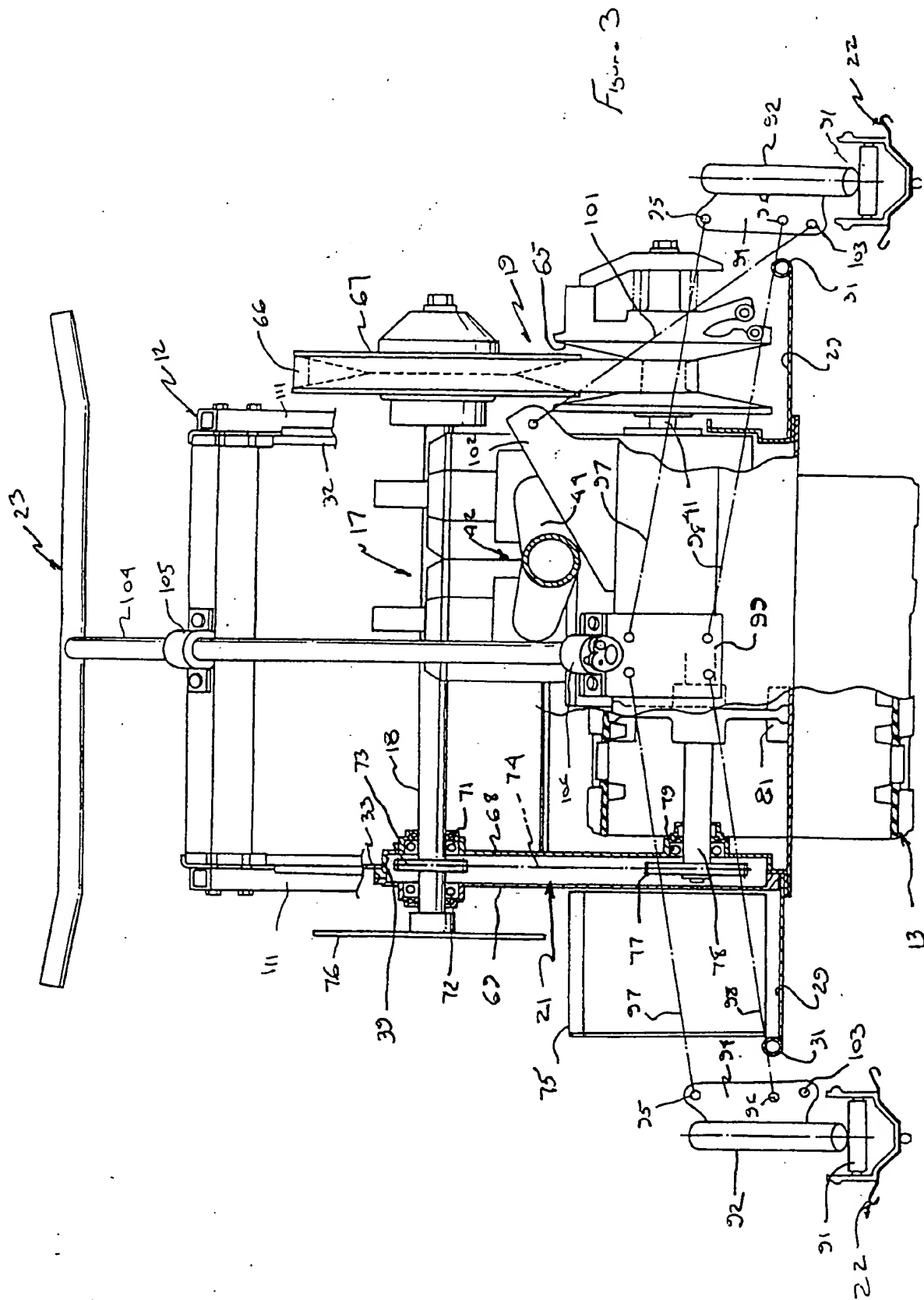


Figure 3

Scott & Ayles



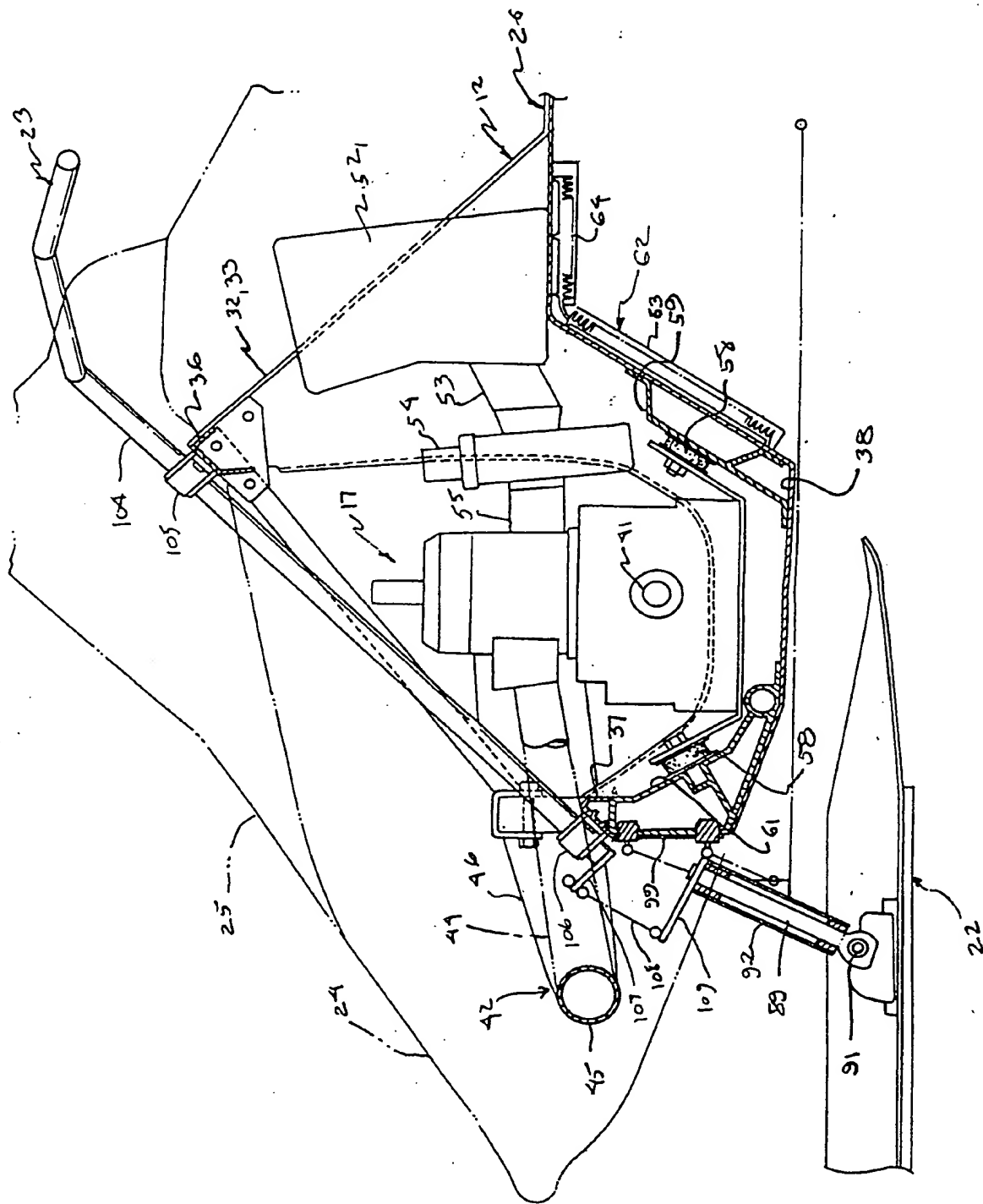


Figure 4

Scott & Aylen

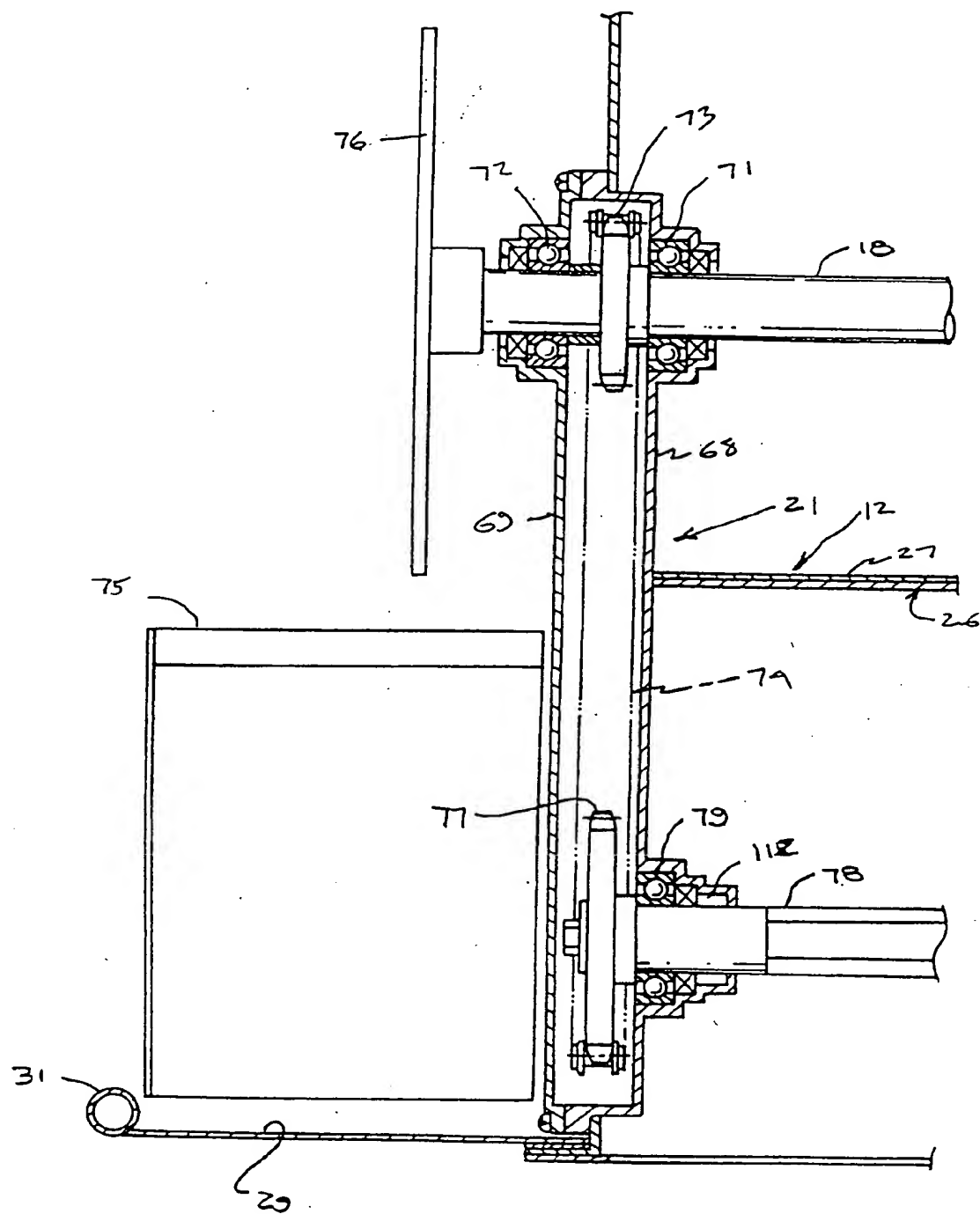


Figure 5

Scott &amp; Aylen

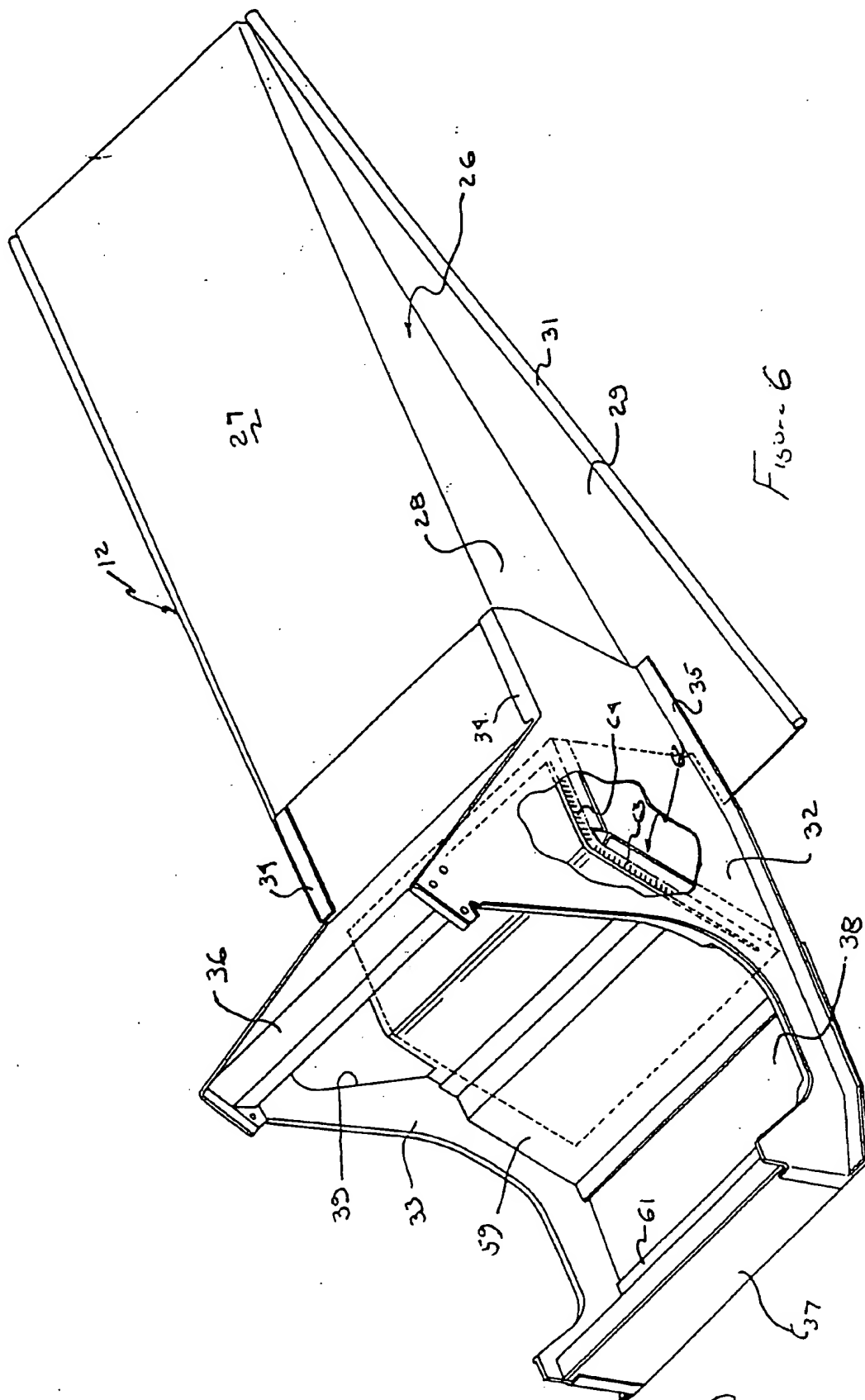


Figure 6

Scott & Aylen